

WEBRASS FOR ETHANOL



Who are We ?

WeBrass Technology Pvt Ltd is poised to revolutionize the industry. Our deep expertise in consulting and advising distilleries on optimizing manufacturing processes with cutting-edge technology has consistently delivered improvements in accuracy, speed, and agility.

Headquartered in Pittsburgh, with offices in London, Bangalore, Gwalior, and Budapest, our team of over 50 professionals has more than 20 years of global experience across cloud computing, cyber security, networking, workforce transformation, and IT infrastructure. Our leadership in automation, AI, and cyber security is pivotal to unleashing the full potential of Gen-5 industrial ethanol plants, ensuring that production is not only safer and greener but also more profitable.





MESSAGE FROM

Eric Bedell

CEO, WeBrass Technology Pvt. Ltd

"Our experience collaborating with leading IT providers has revealed opportunities for greater efficiency and impact, which we continually strive to achieve for our customers."



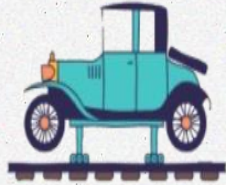
- Industrial Revolution, We call it as Ethanol 4.0



1784

Industry 1.0

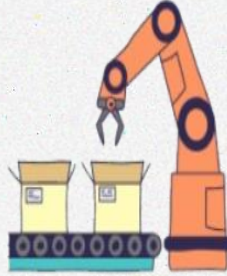
- Steam engine
- Weaving looms
- Mechanics



1870

Industry 2.0

- Assembly lines
- Electricity
- High-volume production



1969

Industry 3.0

- Computerization
- Electrical devices
- Automation



Today

Industry 4.0

- Internet connection
- Device data acquisition
- Data analysis
- Simulation

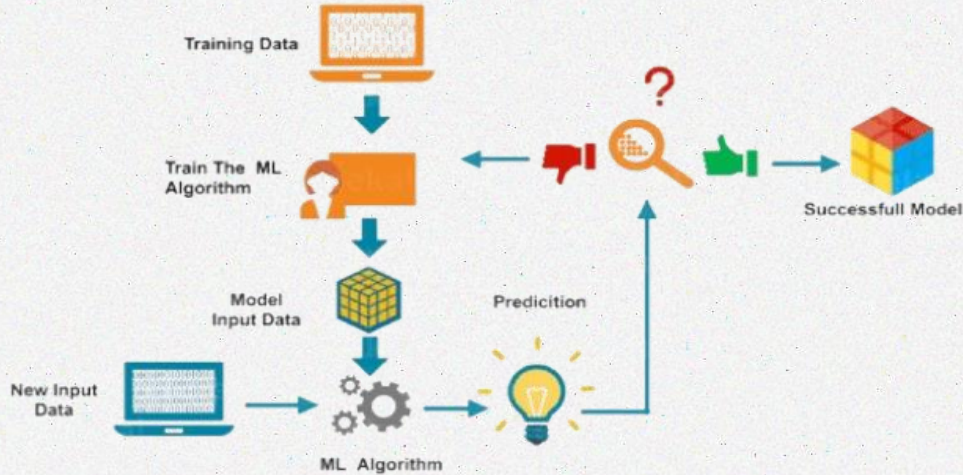


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AI driven Quality Control

- AI algorithms correlate quality data with production parameters
- Automated sampling systems integrated with AI analysis for continuous monitoring



AI driven CyberSecurity

- AI-driven network traffic analysis using deep learning and behavioral analytics
- Automated threat intelligence gathering and integration
- Machine learning algorithms for anomaly detection in both IT and OT networks
- AI-powered simulation of cyber attacks for proactive defense improvements
- Automated patch management and system updates guided by AI risk assessment

The **benefits** of automating AI in **cybersecurity**:



Ongoing learning



Discovering unknown
threats



Vast data volumes



Improved vulnerability
management



Enhanced overall
security posture



Better detection
and response



Innovation in Ethanol 4.0

- **Life Cycle Assessment (LCA) - Supply Chain mgmt. (ERP+CRM)**

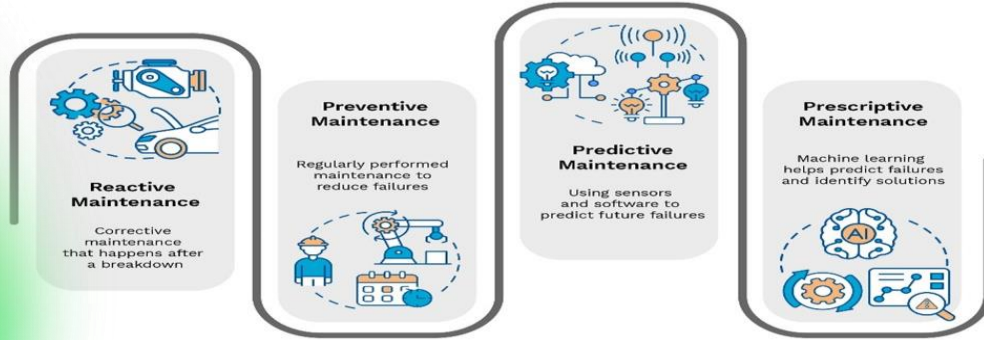
In house light & robust tool to manage You ERP+CRM requirements



Innovation in Ethanol 4.0

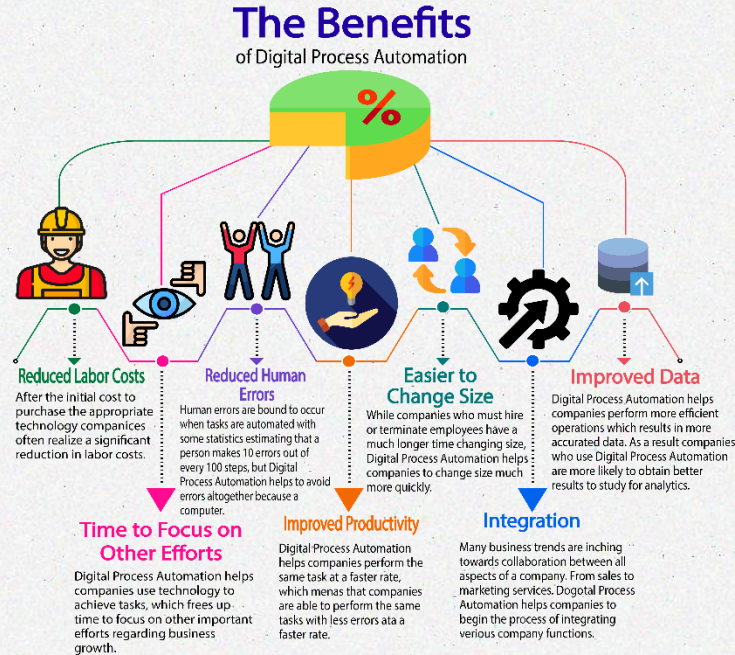
- Predictive detections/Lower Downtime)
 - High-frequency IoT sensors installed on key equipment (e.g., fermenters, distillation columns, centrifuges)
 - Data collected includes vibration patterns, temperature fluctuations, pressure changes, and energy consumption
 - Machine learning models predict potential failures and estimate remaining useful life of components

What is Predictive Maintenance?



Innovation in Ethanol 4.0

- Process Optimization



Innovation in Ethanol 4.0

- **Process Optimization – Predictive Final Outcome**

100/Liters Rs - 100 KLPD - Future 1.2rs

Raw Material – 45% - >> Rice/Maze/Yeast/corn/

Maintenance - 12%

People – 32%

Logistic – 11%

1st Year – 100 Rs/lts

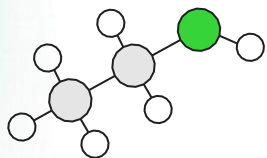
2nd Year – 94 Rs/ltr

3rd Year – 87 Rs/ltr

4th Year – 82 Rs/ltr

5th Year – 79 Rs/ltr





Thank You

